

Local Hazard Mitigation Plan ANNEX

City of Vallejo

Introduction

Vallejo is located 30 miles north of San Francisco in the Greater Bay Area (population 6,800,000), and borders Contra Costa County population 950,000) to the south. Vallejo (population approximately 116,000) is the largest city in Solano County, has a response area of approximately 60 square miles, and is bordered on two sides by waterways. Vallejo is composed of densely-built neighborhoods with modern and Victorian style homes, light industry and a recently closed naval base that is being converted to light and medium industry. Vallejo has several major roadways (State Route 29, State Route 37 and Interstate 80) that intersect throughout the city and bring a multitude of hazards to the city. The City has 464 approved full-time equivalent positions and an annual budget of approximately \$79 million for FY 2006.

The Planning Process

This process of preparing this plan was familiar to the City of Vallejo. The City has a Safety Element to its General Plan last updated in 1995 that includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. Finally, the City provided information on facilities that are viewed as "critical" to ABAG.

Key City staff met on several occasions to identify and prioritize mitigation strategies appropriate for the City. Staff involved in this meetings included the Planning Director, Building Official, Emergency Preparedness Manager, Fire Chief, Public Works Director, and Police Chief. The City provided the opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff at the City Council meeting on February 13, 2007. The resolution adopting the plan and strategies went before City Council on March 6, 2007 and the mitigation strategies will become an implementation appendix to this Safety Element.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-

induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought).

While the City has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The City has had a number of landslides in the hills throughout the City, including one that damaged several homes in 2001.

Information on disasters declared in Solano County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of the 15,925 acres of urban and 4,002 acres of non-urban land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>.

- ◆ Earthquake faulting – No active faults run within the city so rupture of a fault is not a direct concern.
- ◆ Earthquake shaking – 1086 acres are in the highest two categories of shaking potential, in large part because the Hayward and Rodgers fault runs next to the western and north portion of the City.
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Vallejo. However, because few areas have been mapped as landslides, this hazard is viewed as similar to that posed by weather-related hazards.
- ◆ Earthquake liquefaction – 3634 acres in Vallejo are in the very high and high liquefaction susceptibility area, while 1096 acres are in the low liquefaction susceptibility area.
- ◆ Tsunamis – While tsunamis may be a hazard in the City of Vallejo, the mapping of the inundation area has not been completed at this time.
- ◆ Flooding – 4477 acres are within the 100-year flood plain, while 167 acres are in 500 year flood plain area.
- ◆ Landslides – 6299 acres are in the few landslide area while 593 acres are in the mostly landslide area.
- ◆ Wildfires – 1929 acres are subject to high wildfire threat and 201 acres are subject to very high wildfire threat.
- ◆ Dam Inundation – 727 acres are subject to dam inundation

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 453 miles of roadway, 10 miles of railway and 422 miles of pipelines.

- ◆ Earthquake faulting – No active faults run within the city so rupture of a fault is not a direct concern, but the real concern is the ability to move from one side of the city to the other if all the overpasses collapse during the shaking
- ◆ Earthquake shaking – 14 miles of freeway, highways and roads are in the highest categories of shaking potential. 440 miles of freeways, highways and roads are located in the low to high areas.
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Vallejo. However, this is unlikely to be an issue because no roads are in existing landslide areas.
- ◆ Earthquake liquefaction – 91 miles of roadway and 87 miles of pipelines are in high or very high liquefaction susceptibility and 25 miles of roadways and 20 miles of pipelines are in the moderate susceptibility of liquefaction.
- ◆ Tsunamis – While tsunamis may be a hazard in the City of Vallejo, the mapping of the inundation area has not been completed at this time.
- ◆ Flooding – 76 miles of roadway, 4 miles of railway and 73 miles of pipeline are in the 100-year flood plain, while 8 miles of roadway, 1 mile of railway and 7 miles of pipelines are in the 50 year flood plain area.
- ◆ Landslides – 17 miles of roadway and 16 miles of pipelines are in the mostly a landslide area. 193 miles of roadway and 184 miles of pipelines are in the few landslide area.
- ◆ Wildfires – 3 miles of roadway, 2 miles of pipeline are subject to very high, wildfire threat, 37 miles of roadways and 35 miles of pipelines are in the high wildfire threat area.
- ◆ Dam Inundation – 21 miles of roadway, 2 miles of railway and 20 miles of pipeline are subject to dam inundation.
- ◆ Drought – is not a hazard for roadways.

Finally, the City examined the hazard exposure of 15 health care facilities, 35 schools, and 70 critical facilities and 31 bridges and interchanges based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>.

- ◆ Earthquake faulting – No active faults run within the city so rupture of a fault is not a direct concern at this time.
- ◆ Earthquake shaking – 15 health care facilities, 35 schools, 69 critical facilities and 30 bridges and interchanges are in the low to moderate area. 1 critical facility and 1 bridge are in the high to highest potential area.
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the City of Vallejo. However, this is unlikely to be an issue because no roads are in existing landslide areas.
- ◆ Earthquake liquefaction – 12 health care facilities, 29 schools and 58 critical facilities are in the low susceptibility area and 3 health care facilities, 5 schools, 6 critical facilities and 4 bridges or interchanges are in the high or very high areas.
- ◆ Tsunamis – While tsunamis may be a hazard in the City of Vallejo, including to critical facilities, the mapping of the inundation area has not been completed at this time.

- ◆ Flooding –1 health care facility, 0 schools and 5 city-owned facilities are in the 100-year flood plain and 0 health care facilities, 2 schools and 1 critical facility are in the 500 year flood zone.
- ◆ Landslides –8 health care facilities, 16 schools and 44 city-owned facilities are in areas of existing landslides.
- ◆ Wildfires –1 health care facility is in a high threat area, 35 schools are in a low threat area and 4 City owned facilities are in a high or very high threat area.
- ◆ Dam Inundation – 1 critical health care facility is an area subject to dam inundation.
- ◆ Drought – Drought will not affect city buildings directly. However, the city does operate a water-supply distribution system.

In spite of the areas of the City located in flood-prone areas, there is no repetitive loss properties in the City based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The City plans to work with ABAG during 2007 to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft-story apartments located in the City.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and various water supply agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted during 2007.

As these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, City of Vallejo staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at a meeting of the Planning Director, Building Official, Emergency Preparedness Manager, Fire Chief, Public Works Director, and Police Chief. In addition, representatives of the fire district and school district were invited to this meeting, but chose not to attend. At the meeting, all of the mitigation strategies were reviewed. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing City programs.

These draft priorities were submitted to the City Manager for review. The draft priorities were then provided to the City Council on February 13, 2007 and the public was provided with an opportunity to comment on the DRAFT priorities. The final strategies (as shown in the attached Table) will now become an *Implementation Appendix* to the City's *Safety Element*.

In addition, the City examined the hazard exposure information to City-owned critical facilities supplied by ABAG. The City plans to apply for a Pre-Disaster Mitigation grant to retrofit several critical buildings.

The Plan Maintenance and Update Process

The City of Vallejo, Fire Chief or his designee will ensure that **monitoring** of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the meeting of City department heads at least once a year. At that meeting, the department heads will focus on **evaluating** the Annex in light of technological and political changes during the past year or other significant events. This group will be responsible for determining if the plan should be updated.

The City of Vallejo is committed to reviewing and **updating** this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City Fire Chief or his designee will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The **public** will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.